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PTC (IS-Day Pre-Permit Construction) Application

Norsun Food Group, Inc. Sugar City, Idaho

Prepared for

Idaho Department of Environmental Quality

May 2007

2 MHILL

CH2MHILL TRANSMITTAL

To: Idaho Department of Environmental Quality
1410 North Hilton
Boise, 1083706

From: Rick McCormick

Attn: Mr. Bill Rogers
Air Program Manager

Date: May 31,2007

Re: Norsun Food Group, Inc.
15-Day PTC Modification

We Are Sending You:

X	Attached	Under separate cover via	
	Shop Drawings	Documents	Tracings
	Prints	Specifications	Catalogs
	Copy of letter	Other:	

Quantity	Description
	15-Day PTC Modification-Norsun steam and production increase-CD attached w/emission est.

If material received is not as listed, please notify us at once

Remarks:

Copy To:

E/AFS/SF

PTC (IS-Day Pre-Permit Construction) Application

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CH2MHILL

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1.0 Introduction

On behalf of Norsun Food Group, Inc. (Norsun), CH2M HILL has prepared a 15-Day Permit-to-Construct (PTC) application to modify their existing PTC by increasing the facility's potato production capability. Norsun operates a cooked potato processing plant in Sugar City, Madison County, Idaho, approximately 28 miles northeast of Idaho Falls.

Dickinson Foods, Inc. has purchased Norsun. However, Norsun is requesting to keep the permit listed in their name (Dickinson Foods, Inc. DBA Norsun Food Group, Inc). A copy of the current Norsun PTC is included in Appendix A.

The facility modification will consist of two primary changes. The first change will be to increase steam production by increasing the heat input rating of the existing 12.8 MMBtu/hr Clayton steam boiler to approximately 14.6 MMBtu/hr. The second change will be to replace the 12.0 MMBtu/hr Eclipse A-line oven in order to increase roasting production. The A-line oven roaster burners are currently using 6 burners and will be replaced by 4 burners which will result in a net decrease in emissions.

To expedite construction for the increase in potato production, the requirements for Pre-Permit Construction approval will be followed in accordance with the *Rules for the Control of Air Pollution in Idaho* (IDAPA) 58.01.01.213.02. A project meeting was held via telephone with DEQ on April 30, 2007 to discuss the purpose of the project, construction and operation schedule as well as satisfy the pre-permit construction requirements.

An application fee of $1,000.00 has been included with the application submittal in accordance with IDAPA 58.01.01.226. A signed general information application form GI has also been included with this application package. Completed Idaho Department of Environmental Quality (DEQ) application forms are included in Appendix B.

An informational meeting has been scheduled at the Norsun facility located at 903 East 3000 North, Sugar City, Idaho from 2:00 to 3:00 PM on Thursday May 31, 2007. A copy of the public announcement is included in Appendix C.

This pre-permit construction and PTC application includes a process description, plot plan, process flow diagram, emission estimates, modeling protocol and results, and regulatory review. This application is intended to satisfy the requirements for Pre-Permit Construction in accordance with IDAPA 58.01.01.213.

2.0 Process Description

The Norsun plant consists of three separate processing lines, A and B, which are nearly identical and provided various types of cut and cooked potato products, and C, which produces whole baked potatoes. The C-line process line was destroyed over a year ago from a lightning-caused fire jumping across a circuit board. The plant operates the A and B process lines using natural gas exclusively. In addition, Norsun utilizes two ammonia-cooled freezers and precoolers to store their processed potatoes from the A-line and B-line. The potato process lines are included in a process flow diagram (Appendix D).

Normal operation of the plant does not include the release of ammonia from the pressure relief valves, and therefore no emissions will be estimated nor will any modeling be performed for ammonia. Pressure relief valves are only used once or twice a year and only if the freezers are not operating properly.

3.0 Scaled Plot Plan

This 12.5-acre site is located primarily in a rural area. A scaled plot plan of the Norsun facility and property boundary are included in Figure 1. A site plan illustrating the location of the sources is included in Figure 2.

4.0 Potential to Emit Emission Estimates

Emission estimates were calculated based on emission factors provided by available manufacturer data including Caterpillar Engine Generators, and from the Ll.S, Environmental Protection Agency (EPA) *Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume* 1: *Chapter* 1 *External Combustion Sources, Section* 1.4 *Natural Gas Combustion.*

Emission rates were calculated based on an increase in steam and roasting production. Norsun is requesting a throughput increase of 60 tons per day for the A-line oven. This throughput increase results in a maximum daily throughput limit of 180 tons per day for the A-line oven (PTC, P-040511, condition 4.4). Only particulate matter (PM) emission rates increase as a direct result of this requested throughput limit. PM emissions are assumed to equal PM_{10} emission rates. The resulting net increase of PM emissions is 0.07 pound per hour and 0.31 tons per year.

Toxic Air Pollutant (TAP) emissions have been estimated and compared to the screening emission limit (EL) as specified in the regulation (IDAPA 58.01.01585 and 586). TAP emission calculations are below corresponding emission screening limits. Therefore, no further analysis is required.

Emission calculations and manufacturer data are included in Appendix E. A CO containing the emission calculations are included as an attachment with this application.

5.0 Facility Classification

The Norsun facility is not a major facility as defined in IOAPA 58.01.01.008.10, nor is it a designated facility as defined in IOAPA 58.01.01.006.26. The facility emits less than 100 tons per year of any regulated pollutant. 111e site is a minor source for Hazardous Air Pollutants (HAPs) with total potential aggregate HAP emissions of less than 25 tons per year and emissions of any single HAP of less than 10 tons per year. The Norsun facility is not a listed facility in 40 CFR Part 52 (100 tons per year threshold) and is not otherwise subject to Part 52 New Source Review (PSO) requirements due to potential emissions less than all applicable PSO major source thresholds.

Norsun is located in Madison County, Idaho which is designated as unclassifiable for all criteria pollutants (PM_{10}, CO, NO_x, S02, lead, and ozone).

6.0 Ambient Impact Analysis

An air dispersion modeling protocol was prepared by CH2M HILL and submitted to DEQ on April 30, 2007. The source parameters and modeling assumptions were identified within the modeling protocol. PMlO emission rates are below the modeling thresholds as stated in the *State of Idaho Air Quality Modeling Guideline, Table* 1, *Modeling thresholds for criteria pollutants, dated 12/31/02.*

Upon review of the modeling protocol, DEQ confirmed that the project emission increases are below applicable modeling thresholds and that a modeling analysis is not required to adequately demonstrate compliance. The air dispersion modeling protocol and DEQ's e-mail confirmation stating *"that an air quality modeling assessment is not required"* are included in Appendix F.

7.0 Applicable Requirements

A regulatory analysis was performed for the Norsun facility to determine the applicability of state and federal air quality regulations. The regulatory applicability determinations are included in this section.

The following sections address air quality regulatory compliance requirements for the potato processing facility. As detailed below, the source will comply with applicable Idaho air quality regulations codified in IDAPA 58.01.01, as well as applicable EPA Code of Federal Regulations (CFR).

Federal Regulations

New Source Review and Prevention of Significant Deterioration Applicability-40 CFR Parts 51 and 52

In accordance with EPA and IDAPA 58.01.01.205 rules, the proposed facility will not be required to submit a construction permit application subject to the requirements of New Source Review (NSR) as it is not a major new source. The requirements of NSR vary, depending on whether the proposed facility will be located in a non-attainment or attainment area for NAAQS.

New Source Review for Non-Attainment Areas

Non-Attainment Area NSR is the portion of NSR that applies to areas that are not in attainment of NAAQS. Madison County is unclassifiable for all criteria pollutants. Therefore, Non-Attainment Area NSR is not required for the proposed facility.

New Source Review for Attainment or Unclassifiable Areas

Prevention of Significant Deterioration (PSD) is the portion of NSR that applies to pollutants that are in attainment of NAAQS, or are unclassifiable. Madison County is unclassifiable for all criteria pollutants. Therefore, new or modified air emission sources are potentially

subject to PSD review for these pollutants, depending on the proposed facility's major source status and on the emission rates of NOx, CO, S02, VOC, and PM_{lO}.

A PSD review is required if the proposed facility is a major PSD source. A source is considered to be major if:

- It is included in a list of 28 specific source categories and its potential to emit any of the NSR-regulated pollutants exceeds 100 tpy, or
- If its PTE exceeds 250 tpy for any other source category.

The list of 28 specific source categories with the 100 tpy threshold does not include potato processing facilities. Therefore, the proposed source is not subject to a 100 tpy major source threshold for PSD review.

The proposed facility could only be considered to be a PSD major-source if it has a potential to emit (PTE) greater than 250 tpy of any criteria pollutant. The proposed facility will not have a PTE greater than 250 tpy for NOx, CO, VOC, and PM1o, and will not be considered a major PSD source.

New Source Performance Standards-40 CFR Part 60

The Clayton steam boiler will have a design heat input capacity rating of 14.6 MMBtu/hr. Therefore, the New Source Performance Standards (NSPS),listed in 40 CFR 60, Subpart De-Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, will apply to this facility.

- .In accordancewith 40 CFR 60.48c(a), the permittee shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup as required by 40 CFR 60.7 for the boilers.

  The notification shall include the following:

  - the design heat input capacity of the affected facility
  - fuels to be combusted in the affected facility
  - the annual capacity factor at which the permittee anticipates operating the affected facility based on all fuels fired and based on each fuel fired

  Notification shall be submitted to EPA and DEQ at the following addresses.

Ll.S, EPA - Region 10
Office of Air Quality
1200 Sixth Avenue
Seattle, WA 98101

Phone: (206) 553-1200

Air Quality Permit Compliance
Boise Regional Office
Idaho Dept. of Environmental Quality
1445 North Orchard
Boise, ID 83706-2239

Phone: (208) 373-0550

- The monitoring and recordkeeping of fuels combusted in the boilers shall comply with 40 CFR 60.48c(g) and the following:

    - The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day, unless alternative monitoring, recordkeeping, and reporting is formally approved by EPA.
    - The permittee shall maintain written documentation of any EPA-approved monitoring, recordkeeping, and reporting requirements for the boilers.

    Records of this information shall remain on site for the most recent five-year period and shall be made available to DEQ representatives upon request.

National Emission Standards for Hazardous Air Pollutants-40 CFR Part 63

Section 112 of the Clean Air Act (CAA) Amendments relates to the release of air toxic contaminants. The requirements of CAA Section 112(g) or (j) are not applicable because the facility is not a major source of hazardous air pollutants (HAP) (40 CFR 63.40(b». Part 63 NESHAPS applies to major sources of HAP, defined as PTE equal to or greater than 10 tpy for any single HAP or PTE equal to or greater than 25 tpy for total HAP. HAP emissions from the facility will be below these threshold amounts.

Acid Rain Deposition Control Program-40 CFR Part 72,73, 74, and 75

The acid rain deposition control program applies to electric utility steam-generating units. The proposed facility is not a utility steam generating unit and not subject to the acid rain deposition control program based on the definition of an affected unit.

Protection of Stratospheric Ozone-40 CFR Part 82

Refrigerants that contain ozone-depleting substances are regulated under the Stratospheric Ozone Protection Program (40 CPR 82). The applicable requirements under this program will be performed including maintenance of equipment containing substances (such as comfort coolers).

Accidental Release Prevention Program-40 CFR Part 68

The storage or use of listed hazardous substances above threshold amounts will not occur at the Norsun facility. Therefore, a Risk Management Plan (RMP) as described under Part 68 will not be required.

Compliance Assurance Monitoring (CAM)-40 CFR Part 64

The CAM rule (40 CFR 64) applies to each Pollutant Specific Emissions Unit (PSEU) when it is located at a major source that is required to obtain Title V, Part 70 or 71 permit and it meets all of the following criteria:

ll1e PSEU must:

- be subject to an emission limitation or standard
- use a control device to achieve compliance

- have potential pre-control emissions that exceed or are equivalent to the major source threshold

Norsun is not a major facility nor will they contain any PSEUs. Therefore, the CAM rule is not applicable for this facility.

IDAPA Regulations

IDAPA 58.01.01.123
CERTIFICATION OF DOCUMENTS

> "All documents, including but not limited to, application forms for permits to construct, application forms for operating permits, progress reports, records, monitoring data, supporting information, requests for confidential treatment, testing reports or compliance certifications submitted to the Department shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

IDAPA 58.01.01.124
TRUTH, ACCURACY AND COMPLETENESS OF DOCUMENTS.

> "All documents submitted to the Department shall be truthful, accurate and complete."

IDAPA 58.01.01.125
FALSE STATEMENTS

> "No person shall knowingly make any false statement, representation, or certification in any form, notice, or report required under any permit, or any applicable rule or order in force pursuant thereto."

IDAPA 58.01.01.130
STARTUP, SHUTDOWN, SCHEDULED MAINTENANCE, SAFETY MEASURES, UPSET AND BREAKDO\VN.

1. External Combustion Engines

If an excess emission event occurs during startup, shutdown, scheduled maintenance, safety measures, upset or breakdown, Norsun will comply with IDAPA 58.01.01.130 through 58.01.01.136.

In the event of an upset or breakdown of an engine, the malfunctioning unit would be shut down. This includes any malfunction that could create excess emissions.

IDAPA 58.01.01.156
TOTAL COMPLIANCE

> "Where more than one (1) section of these rules applies to a particular situation, all such rules must be met for total compliance, unless otherwise provided for in these rules."

IDAPA 58.01.01.157
TEST METHODS AND PROCEDURES

1. External Combustion Engines

If an emission test is required, Norsun will adhere to procedures outlined in IDAPA 58.01.01.157.

IDAPA 58.01.01.161
TOXIC SUBSTANCES

1. External Combustion Engines

"Any contaminant which is by its nature toxic to human or animal life or vegetation shall not be emitted in such quantities or concentrations as to alone, or in combination with other contaminants, injure or unreasonably affect human or animal life or vegetation."

See emission calculations in Appendix E.

IDAPA 58.01.01.200
PROCEDURES AND REQUIREMENTS FOR PERMITS TO CONSTRUCT

1. External Combustion Engines

Upon approval of the 15-Day PTC by DEQ, Norsun will follow the procedures and requirements outlined under lDAPA 58.01.01.200 for obtaining a PTC.

IDAPA 58.01.01.210
DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE 'VITH TOXIC STANDARDS

1. External Combustion Engines

"In accordance with Subsection 203.03, the applicant shall demonstrate preconstruction compliance with Section 161 to the satisfaction of the Department. The accuracy, completeness, execution and results of the demonstration are all subject to review and approval by the Department."

See emission calculations in Appendix E.

IDAPA 58.01.01.213
PRE-PERMIT CONSTRUCTION

1. External Combustion Engines

Norsun will comply with procedures and regulations outlined in this section in order to obtain the 15-Day PTC.

IDAPA 58.01.01.213.02. Permit to Construct Procedures for Pre-Permit Construction

IDAPA 58.01.01.213.02.a Informational Meeting

"Within ten (10) days after the submittal of the pre-permit construction approval application, the owner or operator shall hold an informational meeting in at least one (1) location in the region in which the stationary source or facility is to be located. The informational meeting shall be made known by notice published at least ten (10)

days before the meeting in a newspaper of general circulation in the countyfies) in which the stationary source or facility is to be located. A copy of such notice shall be included in the application."

See a copy of the Public Meeting Notice in Appendix C.

IDAPA 58.01.01.220
GENERAL EXEMPTION CRITERIA FOR PERMIT TO CONSTRUCT EXEMPTIONS

IDAPA 58.01.01.221 Category I Exemption

"No permit to construct is required for a source that satisfies the criteria set forth in Section 220 and the following:"

IDAPA 58.01.01.221.01 Below Regulatory Concern,

"111emaximum capacity of a source to emit an air pollutant under its physical and operational design considering limitations on emissions such as air pollution control equipment, restrictions on hours of operation and restrictions on the type and amount of material combusted, stored or processed shall be less than ten percent (10%) of the significant emission rates set out in the definition of significant at Section 006."

111efacility does not meet the BRC criteria of a Category I exemption outlined in IDAPA 58.01.01.221.01 (Below Regulatory Concern).

IDAPA 58.01.01.300
PROCEDURES AND REQUIREMENTS FOR TIER I OPERATING PERMITS

"The purposes of Sections 300 through 399 are to establish requirements and procedures for the issuance of Tier I operating permits." Norsun is not subject to the applicable requirements in Section 300 through 399.

IDAPA 58.01.01.577
AMBIENT AIR QUALITY STANDARDS FOR SPECIFIC AIR POLLUTANTS
(PM-IO, SOx, NOx, CO, Pb)

1. External Combustion Engines

IDAPA 58.01.01.577.01 PM-10 Standards

IDAPA 58.01.01.577.01.a Primary and Secondary Standards

IDAPA 58.01.01.577.01.a.i Annual Standard
"Fifty (50) micrograms per cubic meter, as an annual arithmetic mean -- never expected to be exceeded in any calendar year."

IDAPA 58.01.01.577.01.a.ii 24-hr Standard
"One hundred fifty (150) micrograms per cubic meter as a maximum twenty-four (24) hour concentration -- never expected to be exceeded more than once in any calendar year."

IDAPA 58.01.01.577.02 Sulfur Oxides (Sulfur Dioxide)

IDAPA 58.01.01.577.02.a Primary Standards

lOAPA 58.01.01.577.02.a.i Annual Standard
"Eighty (80) micrograms per cubic meter (0.03 ppm), as an annual arithmetic mean-not to be exceeded in any calendar year."

lOAPA 58.01.01.577.02.a.ii 24-hr Standard
"Three hundred sixty-five (365) micrograms per cubic meter (0.14 ppm), as a maximum twenty-four (24) hour concentration-not to be exceeded more than once in any calendar year."

lOAPA 58.01.01.577.02.b Secondary Standard
"Secondary air quality standards are one thousand three hundred (1,300) micrograms per cubic meter (0.50 ppm), as a maximum three (3) hour concentration-not to be exceeded more than once in any calendar year."

IDAPA 58.01.01.577.04 Nitrogen Dioxide

"Primary and secondary air quality standards are one hundred (100) micrograms per cubic meter (0.05 ppm) – annual arithmetic mean."

IDAPA 58.01.01.577.05 Carbon Monoxide Primary and Secondary Standards

lOAPA 58.01.01.577.01.a
"Eight (8) Hour Standard. Ten (10) milligrams per cubic meter (9 ppm) - maximum eight (8) hour concentration not to be exceeded more than once per year."

lOAPA 58.01.01.577.01.b
"One (1) Hour Standard. Forty (40) milligrams per cubic meter (35 ppm) – maximum one (1) hour concentration not to be exceeded more thanonce per year."

IDAPA 58.01.01.577.7 Lead

"Primary and secondary standards for lead and its compounds, measured as elemental lead, are one and one-half (1.5) micrograms per cubic meter (1.5 ug/m3), as a quarterly aritlunetic mean -- not to be exceeded in any quarter of any calendar year."

IDAPA 58.01.01.578
DESIGNATION OF ATTAINMENT, UNCLASSIFIABLE, AND NONATTAINMENT AREAS

The proposed site for the stationary sources, Madison County, is in an unclassifiable area for NOX, CO, SOX, ozone, lead, and PM10; the appropriate modeling parameters will reflect this designation.

IDAPA 58.01.01.590
NEW SOURCE PERFORMANCE STANDARDS

The proposed sources are subject to 40 CFR Part 60 - please see compliance review in the federal summary.

IDAPA 58.01.01.591
NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

The proposed sources are not regulated under 40 CFR Part 61 and 40 CFR Part 63, since the Norsun facility is below threshold limits.

IDAPA 58.01.01.625
VISIBLE EMISSIONS

1. External Combustion Engines

"A person shall not discharge any air pollutant into the atmosphere from any point of emission for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period which is greater than twenty percent (20%) opacity as determined by this section."

IDAPA 58.01.01.650
RULES FOR CONTROL OF FUGITIVE DUST

Norsun will take all reasonable precautions to prevent the generation of fugitive dust as outlined under IDAPA 58.01.01.650-651.

IDAPA 58.01.01.651
GENERAL RULES

"All reasonable precautions shall be taken to prevent particulate matter from becoming airborne. In determining what is reasonable, consideration will be given to factors such as the proximity of dust emitting operations to human habitations and/or activities and atmospheric conditions which might affect the movement of particulate matter. Some of the reasonable precautions may include, but are not limited to, the following:"

IDAPA 58.01.01.651.01 Use Of Water or Chemicals
"Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land."

IDAPA 58.01.01.651.02 Application Of Dust Suppressants
"Application, where practical, of asphalt, oil, water or suitable chemicals to, or covering of dirt roads, material stockpiles, and other surfaces which can create dust."

IDAPA 58.01.01.651.03 Use Of Control Equipment.
"Installation and use, where practical, of hoods, fans and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations."

IDAPA 58.01.01.651.04 Covering Of Trucks
"Covering, when practical, open bodied trucks transporting materials likely to give rise to airborne dusts."

IDAPA 58.01.01.651.05 Paving
"Paving of roadways and their maintenance in a clean condition, where practical."

IDAPA 58.01.01.651.06 Removal Of Materials
"Prompt removal of earth or other stored material from streets, where practical."

IDAPA 58.01.01.675
FUEL BURNING EQUIPMENT - PARTICULATE MATTER

1. External Combustion Engines

Norsun will adhere to guidelines under IDAPA 58.01.01.675 through IDAPA 58.01.01.681 with regards to particulate emissions for fuel burning equipment.

IDAPA 58.01.01.676-677
STANDARDS FOR NEW SOURCES

1. External Combustion Engines

"A person shall not discharge into the atmosphere from any fuel burning equipment with a maximum rated input of ten (10) million BTUs per hour or more, and commencing operation on or after October I, 1979, particulate matter in excess of the concentrations shown in the following table:"

Fuel Type	Allowable Particulate *gr/dscf*	Emissions, @Oxygen
Gas	0.015	3%

As calculated in Appendix E, the PM emissions from the steam boiler will comply with the applicable IDAPA standard.

IDAPA 58.01.01.700-701
PARTICULATE MATTER-PROCESS WEIGHT LIMITATIONS

As calculated in Appendix E, the PM process weight for the A-line oven will comply with the applicable IDAPA standard.

IDAPA 58.01.01.775
RULES FOR CONTROL OF ODORS

Norsun will follow the guidelines set under IDAPA 58.01.01.775 through IDAPA 58.01.01.776 to control odorous emissions from all sources for which no gaseous emission control rules apply.

IDAPA 58.01.01.776
GENERAL RULES

IDAPA 58.01.01.776.01 General Restrictions

"No person shall allow, suffer, cause or permit the emission of odorous gases, liquids or solids into the atmosphere in such quantities as to cause air pollution."

Figures

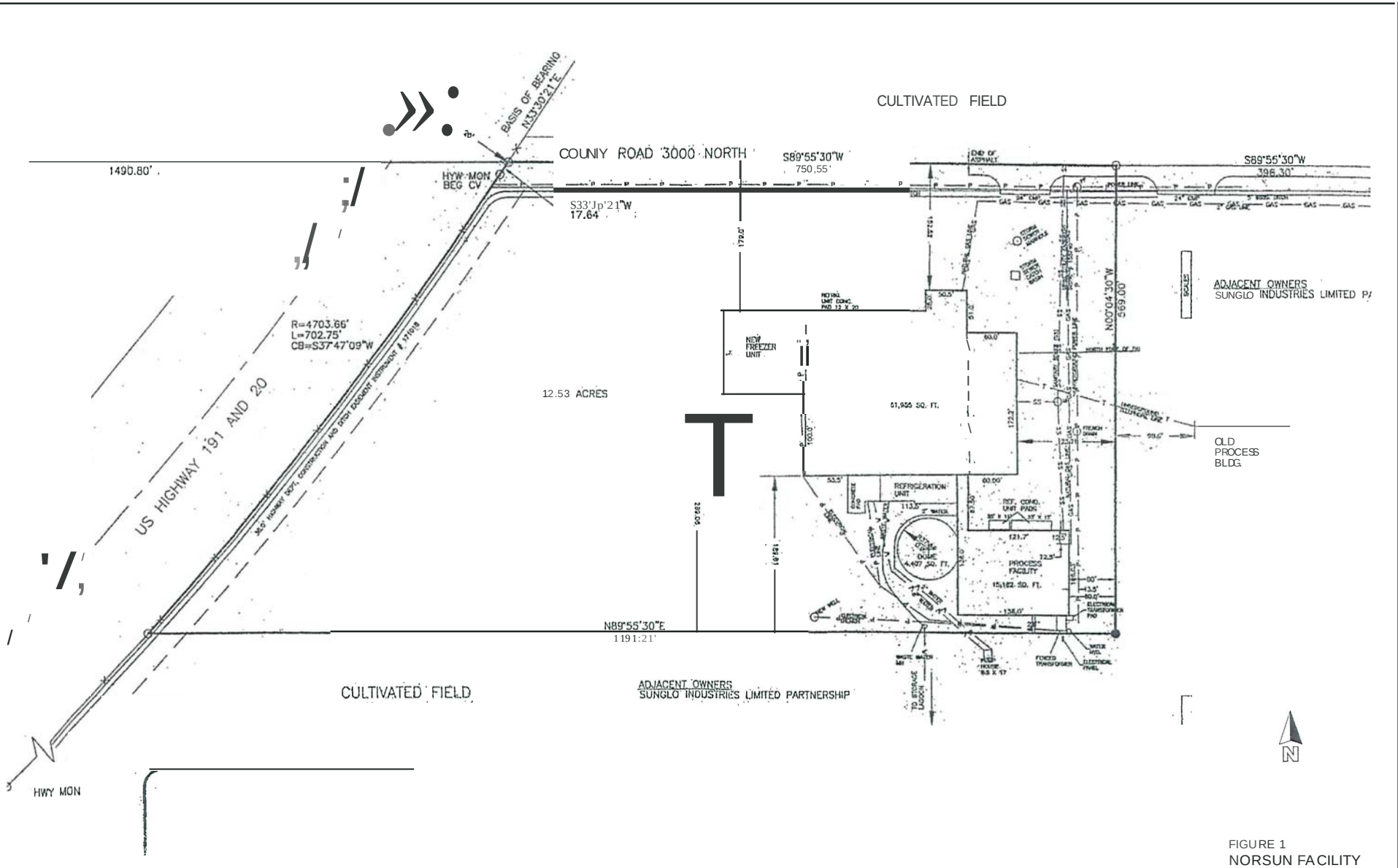

FIGURE 1
NORSUN FACILITY
SITE LOCATION MAP
903 EAST 3000 NORTH
SUGAR CITY, ID 83448

179798,C1,01

CH2MHILL

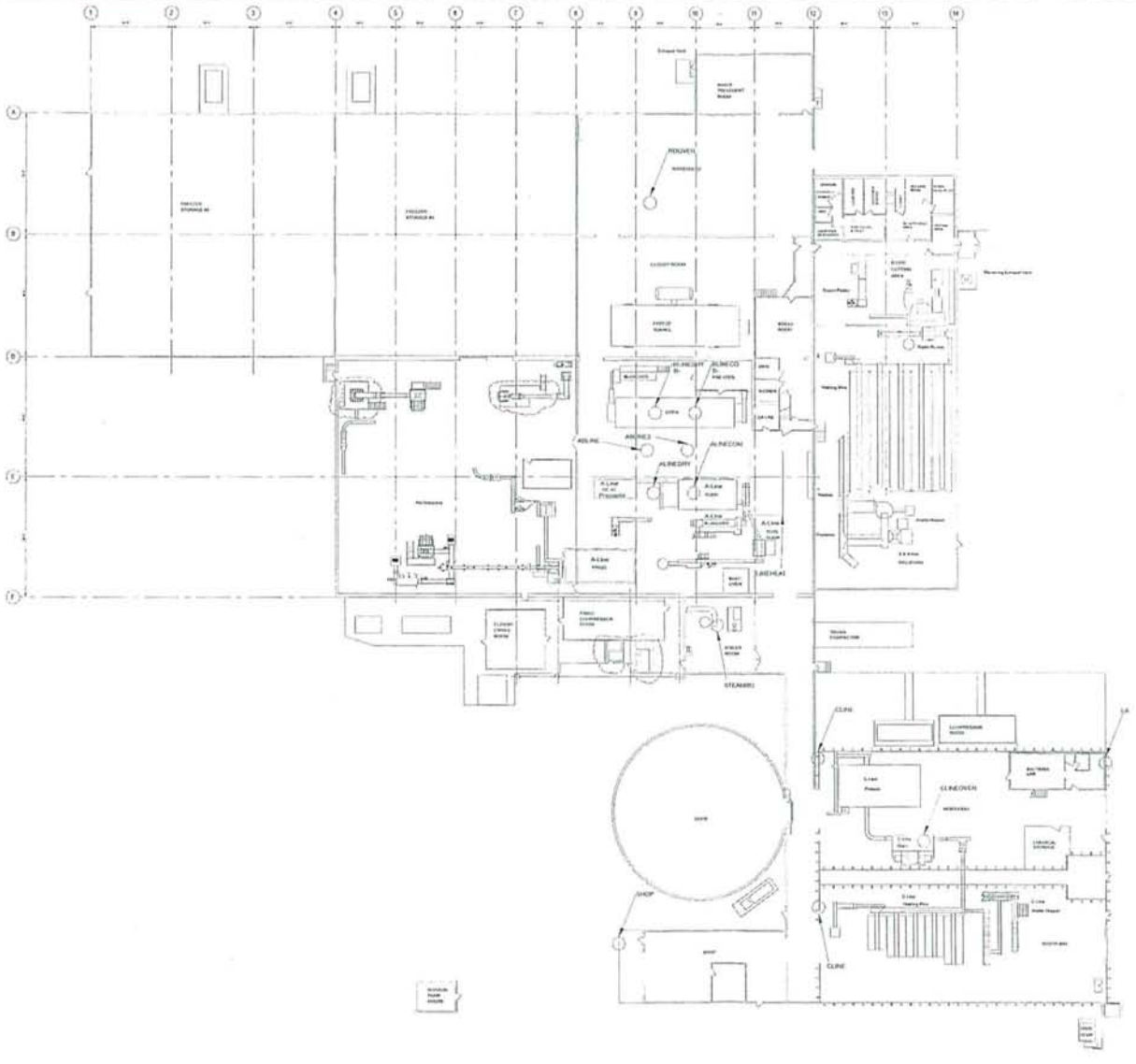

FIGURE 2
NORSUN FACILITY
SITE PLAN
903 EAST 3000 NORTH
SUGAR CITY, ID 83448

179798.C1.01

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